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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,362	05/22/2001	Dominique Hamoir	Q64544	6876

7590 09/22/2004  
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Washington, DC 20037-3213

EXAMINER

PASCAL, LESLIE C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/856,362

Applicant(s)

HAMOIR, DOMINIQUE

Examiner

Leslie Pascal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 recites the limitation "the fiber" in line 3. There is insufficient antecedent basis for this limitation in the claim. It would appear that "the fiber" of claim 9 is referring to "optical media" of claim 1.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Means for emitting lower powers over the end of the band are not disclosed in the original specification. It is not clear what is providing this function. The specification does not disclose how this is done or by what means.

5. Claims 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In regard to claim 9, it appears that there is no separate means that provides the compensation. If the only item claimed is the fiber, which appears to be the "optical media" of claim 1 (see above 112, second paragraph rejection). It would appear that

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the combination of claim 1 and claim 9 is a single means. It appears that the only item claimed is a fiber since the compensation means is the fiber.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the means for emitting lower powers over the end of the band of claim 10, the distributed amplification means of claims 16-18, Raman amplification means of claim 17 and rare earth amplification means of claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 5, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by The French patent described in the specification (No. 99/07324).

The French patent described in the specification (No. 99/07324) as taught by applicant has an optical media (link) and means to compensate for energy transfers caused by the Ramon effect (page 3 of applicant's specification, lines 16-20, "injecting pumps at wavelengths lower than those of the signals of a wavelength division multiplex into a link in order to compensate for the tilt caused by the Raman effect on the channels of the multiplex"). In regard to claim 5, applicant teaches that, "The energy provided by the pumps compensates for the losses from the initial channels of the multiplex."

9. Claims 1, 5, 7, 10-11, 14, 16, 18-19 rejected under 35 U.S.C. 102(b) as being anticipated by Berger (6088152).

Berger teaches an optical media (130) and compensating means (amplifier, shown in detail in figure 4, column 4, lines 4-6). In regard to claims 5 and 14, in that he compensates for all of the channels, Berger is capable of compensating for depletion in channels over the beginning band. In regard to claims 7, 10 and 19, in that he compensates for all of the channels, Berger is capable of compensating for enrichment

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of the channels over the end of the band. In regard to claim 10, it would appear that the compensation means provides or emits lower power over the end band. In regard to claims 16 and 18, see column 3, line 40.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4, 9 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger.

Although Berger does not teach specifically that his wavelengths are above 1620, 1650 or 1670 nm, it would have been obvious to use higher wavelengths in order to have a broader band system and provide more channels.

12. Claims 2-3, 6, 8, 12-13, 15, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita (6611369) in view of Berger.

Although Berger does not specifically teach the bandwidth is greater than 20 or 30 THz, Matsushita teaches a Raman amplifier which has channel spacing of 200 nm (column 4, lines 3-4). It would have been obvious to use the solution of Berger in the system of Matsushita since the applicant teaches compensation of Raman effect for broadband and non broad band systems would provide a benefit (page 13, lines 19-20). In regard to claim 17, Matsushita teaches Raman amplification and Berger teaches Erbium doped. On page 12 of the specification, the applicant teaches that either type of amplification could be used. Further, it would have been obvious to make this rejection

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with Berger in view of Matsushita. Since it would have been obvious to modify the Berger reference to have the channel spacing of Matsushita.

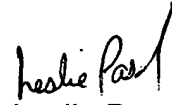
13. Claims 2, 6, 8, 12, 15, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Islam (6356384) in view of Berger.

Although Berger does not specifically teach the bandwidth is greater than 20 or 30 THz (150-200 nm), Islam teaches a Raman amplifier which has channel spacing of 190 nm (column 3, lines 63-66). It would have been obvious to use the solution of Berger in the system of Islam since the applicant teaches compensation of Raman effect for broad band (Islam) and non-broadband systems (Berger) would provide a benefit (page 13, lines 19-20 of the specification). In regard to claim 17, Islam teaches Raman amplification and rare earth doped amplifiers and Berger teaches Erbium doped (rare earth). On page 12 of the specification, the applicant teaches that either type of amplification could be used. Further, it would have been obvious to make this rejection with Berger in view of Islam. Since it would have been obvious to modify the Berger reference to have the channel spacing of Islam.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday, Friday 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Leslie Pascal  
Primary Examiner  
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LP